

AD-A079 271

ARMY PERSONNEL RESEARCH OFFICE WASHINGTON DC
DEVELOPMENT OF ITEM POOLS FOR NEW COMBAT SELECTION TESTS. (U)
SEP 66 C G GREEN
APRO-RM-66-7

F/G 5/10

UNCLASSIFIED

NL

| OF |
AD
A079271



END
DATE
FILMED
2-80
DDC

ADA 079271

Research Memorandum 66-7

LEVEL

**DEVELOPMENT OF ITEM POOLS
FOR NEW COMBAT SELECTION TESTS**

September 1966

DDC
RECEIVED
DEC 19 1979
RECEIVED
A

DDC FILE COPY

DISTRIBUTION STATEMENT A

Approved for public release
Distribution Unlimited



U. S. ARMY PERSONNEL RESEARCH OFFICE

79 12 18 213

Army Project Number
2J024701A722

Combat Selection b-11

⑨ *memos*
Research Memorandum 66-7

⑥ DEVELOPMENT OF ITEM POOLS FOR NEW COMBAT SELECTION TESTS .

⑭ APPRO-RM-66-7

⑩ Calvin G. Green

Francis F. Medland, Task Leader

12 92

Submitted by:
William H. Helme
Acting Chief, Behavioral
Evaluation Research Laboratory

Approved by:
J. E. Uhlaner
Director
USAPRO Laboratories

⑪
September 1966

Research Memorandums are informal reports on technical research problems. Limited distribution is made, primarily to personnel engaged in research for the U. S. Army Personnel Research Office.

040 650 xlt

DEVELOPMENT OF ITEM POOLS FOR NEW COMBAT SELECTION TESTS

Classification of new Army recruits for assignment to combat MOS is based in part on two tests of the Army Classification Battery (ACB)--the Classification Inventory (CI) and the General Information Test (GIT). Two separate combat aptitude area scores are derived from the ACB: the Infantry Aptitude Area (IN) and the Artillery-Armor-Engineer Aptitude Area (AE). The CI is used in conjunction with the Arithmetic Reasoning test (AR) for assignment of recruits to Infantry MOS.¹ The GIT is used in conjunction with the Automotive Information test (AI)² to assign recruits to MOS in the Artillery, Armor, and Engineer occupational areas.

Validity information on the CI and GIT was obtained in research initiated ten to fifteen years ago. It is considered necessary to develop new validity data on these tests because (1) the subject matter content of the GIT may be affected with the passage of time; (2) both tests may be subject to compromise after having been used for such a long period of time, and (3) combat tactics have undergone modification over the past several years.

The current utilization of Army personnel in Vietnam provides the opportunity to validate combat selection tests against an actual combat criterion. Therefore, new experimental forms of the CI and GIT have been constructed to develop item pools. The experimental forms were designated CI-5X (PT 4572) and GIT-5X (PT 4573).

DEVELOPMENT OF EXPERIMENTAL FORMS

The Classification Inventory. The current operational CI contains 125 self-descriptive personality type items. Four different item formats are used in the test. A hypothetical example of each is shown below.

Type 1 (15 items). Would you like, dislike, or be indifferent to the following occupation?

"Astronaut"

Type 2 (25 items). Pick one that describes you most.

- A. Stern
- B. Forceful
- C. Strong
- D. Impulsive
- E. Content

¹ (IN = AR + 2CI/3)

² (AE = GIT + AI/2)

Accession For	
NTIS GRA&I	<input checked="checked" type="checkbox"/>
DDC TAB	<input type="checkbox"/>
Unannounced	<input type="checkbox"/>
Justification	
By	
Distribution/	
Availability Codes	
Dist	Avail and/or special
A	

Type 3 (10 items). Which would you like better?

- A. Belonging to a social club.
- B. Trout fishing.

Type 4 (75 items). Does the following statement describe you?

"I am content with my position in life"

- A. Yes.
- B. No.

The scale dimensions of these items were determined from the consensus of five psychologists making independent judgments. The judgments were made rationally from a study of the item content and also from a study of an inter-item correlation matrix. Items representative of each dimension are listed in Appendix A by the numbers under which they appear in the Classification Inventory CI-1, PT-3296. The dimensions are as follows:

1. Emotional Stability
2. Masculinity
3. Leadership
4. Social Responsibility
5. Energy
6. Independence
7. Decisiveness
8. Acceptance of Discipline
9. Sociability
10. Combat Potential
11. Miscellaneous

A supplemental pool of 159 items intended to cover the same dimensions was added to the original 125 items to form the CI-5X. Some of the new items were composed by APRO psychologists and others came from a pool of untested items which were available in the files of the U. S. Army Personnel Research Office. Final selection was made by a team of psychologists.

The General Information Test. The current GIT consists of 100 information items in two 50-item tests dealing with knowledge of outdoor and masculine-type activities. Knowledge of an activity is taken to be an indication of some interest in the area.

The GIT was originally developed for the Army by the American Institute for Research under contract. Items of different types were tried out and the ones that seemed to show some validity were classified into four major categories.

Team Sports

Individual Sports

Hobbies and Pastimes

Military Information

The category of Hobbies and Pastimes contains some negative prediction items in that they are generally considered to be non-masculine and non-out-door types of items. For example, interest in butterfly catching might be a negative predictor of combat effectiveness. The remainder of the items in the GIT are all positive items in that an interest in a certain area is considered indicative of combat effectiveness.

The GIT-5X consists of 86 items from the current forms which are thought to be still potentially useful and 64 new items of a similar type. The decisions made with respect to selection of items from the operational GIT and the addition of new items were made by a team of psychologists. Items were eliminated from the GIT on two bases: First, the judgment of five psychologists in conjunction with the advice of an experienced Army officer was used to determine whether an item had become outdated or was otherwise inappropriate. Second, the results of 200 operational test papers were examined in terms of the percentage of correct vs. alternative choices made to determine the difficulty of both the correct and incorrect choices. An item with an extreme percentage of rights or wrongs for the correct or an alternate response was examined and either changed or discarded. Some of the added items were composed by the psychologists. The remainder came from a pool of untested items which were available at APRO. All items are of the same type with a four-choice multiple choice format. A hypothetical example is shown below:

In duckpins, the maximum number of balls thrown per frame is:

- A. One
- B. Two
- C. Three
- D. Four

Items in the experimental pool (GIT-5X, PT 4573) classified by category are listed by item number in Appendix B.

Planned Validation of Experimental Tests. The two experimental tests were administered at eight Army Reception Stations to approximately 32,000 new recruits during the spring of 1966. Based on previous history, it is anticipated that approximately 12,000 of the recruits will receive a combat MOS. That portion of the 12,000 who go to Vietnam will be the principal part of the experimental sample. It is planned to get combat performance ratings on as many as possible of the men who will see action. It is anticipated that combat ratings may be obtained on 4000 to 5000 men.

Ratings to be obtained during the spring of 1967 will constitute the criterion for both the item selection phase of the analysis and the validation phase of new forms of the operational instrument.

SELECTED BIBLIOGRAPHY

- Berkhouse, R. G., Kaplan, H. and deJung, J. Construction of two experimental forms of the General Information Test. Research Memorandum 61-8, 1961.
- Egbert, R. L. et al. The characteristics of fighters and non-fighters I. Analysis of intelligence and personality scales. Fort Ord, Calif.: AFF Human Research Unit No. 2, 1954.
- Medland, F. F. Selection and assignment of combat and Special Warfare personnel. Research Memorandum 64-3, 1964.
- Weislogel, R. L. et al. Development of experimental tests for combat arms classification. Technical Research Note 45, 1955.
- Willemin, L. P. et al. Validation of potential combat predictors in overseas maneuvers. Technical Research Note 80, 1957.
- Willemin, L. P. and Karcher, E. K., Jr. Development of combat aptitude areas. Technical Research Report 1110, 1958.

APPENDIX A

SAMPLE ITEM NUMBERS FOR THE TEN SCALE DIMENSIONS OF THE
CLASSIFICATION INVENTORY (CI-1, PT 3290)

Dimensions	Item Numbers
Emotional Stability	30 to 40
Masculinity	66 and 74
Leadership	87 and 108
Social Responsibility	51 and 70
Energy	29 and 57
Independence	37 and 83
Decisiveness	61 and 86
Acceptance of Discipline	55 and 104
Sociability	27 and 62
Combat Potential	3 and 4

APPENDIX B

GENERAL INFORMATION TEST (GIT-5X, PT 4573) ITEM
NUMBERS CLASSIFIED BY CATEGORY

Team Sports (19 Items): 1, 10, 32, 60, 62, 63, 71, 73, 84, 87, 93, 98,
101, 118, 128, 131, 136, 142, 147.

Individual Sports (26 Items): 4, 6, 11, 16, 17, 26, 36, 40, 46, 54,
59, 69, 78, 79, 90, 95, 102, 109, 111, 120, 121, 125, 134, 138,
141, 150.

Hobbies and Pastimes (73 Items): 2, 5, 8, 9, 12, 13, 14, 15, 19, 20,
21, 22, 23, 24, 31, 33, 34, 37, 38, 39, 45, 47, 49, 51, 52, 55,
57, 64, 65, 66, 67, 68, 70, 72, 76, 77, 81, 82, 83, 85, 88, 91,
92, 94, 96, 97, 100, 103, 104, 105, 106, 107, 108, 110, 113, 114,
115, 116, 117, 119, 122, 127, 129, 130, 132, 135, 139, 140, 143,
145, 146, 148, 149.

Military Information (32 Items): 3, 7, 18, 25, 27, 28, 29, 30, 35, 41,
42, 43, 44, 48, 50, 53, 56, 58, 61, 74, 75, 80, 86, 89, 99, 112,
123, 124, 126, 133, 137, 144.